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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,130	01/14/2004	Thomas A. Fields	2002-0356.02	3813

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EXAMINER

PHAM, HAI CHI

ART UNIT PAPER NUMBER

2861

DATE MAILED: 03/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/757,130

Applicant(s)

FIELDS ET AL.

Examiner

Hai C. Pham

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12, 13 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 9-11, 14-17 and 22-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/14/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 4, 7-8, 12-13, 18, 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Loce et al. (U.S. 6,816,269).

Loce et al. discloses a method and apparatus for correcting registration and warping such as ROS bow in an image path resulting from a laser scan process in an electrophotographic machine (Fig. 2), said electrophotographic machine including a photoconductive device (photoreceptor or web 30) having an image forming surface, said method comprising the steps of obtaining correction data relative to a bowed image (static correction data being stored in a memory to correct for ROS bow) (col. 6,

line 50 to col. 7, line 30), and offsetting at least a portion of non-bowed image data (e.g., scan line 15 having a bow as shown in Fig. 1) dependent upon said correction data, and additionally dependent upon halftone cell growth of a halftone cell (image artifacts due to halftone screens, which are controlled by the cell growth pattern) (col. 8, lines 48-59).

Loce et al. further teaches said offsetting step including forming bowed image data as a result of said offsetting step and sending said bowed image data to a laser printhead (e.g., warping the bow image trajectory 15 to straighten the image line) (col. 5, lines 44-51).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-3, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loce et al. in view of Wang (U.S. 6,917,443).

Loce et al. discloses all the basic limitations of the claimed invention except for defining the halftone cell growth as including an order in which pels are assigned within a halftone cell, the halftone cell is a matrix of pels.

However, it is well known in the art that the output of the halftone screens, normally constituted by a matrix NxM of cells (see Wang col. 6, lines 7-22), are

controlled by the cell growth of the base cell or the sequence of filling by the base cells as evidenced by Wang at col. 16, lines 3-12.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to correct the ROS bow in the device of Loce et al. in accordance with the halftone cell growth or fill-in sequence of the cells since Wang teaches the halftoning screen is controlled by the order of the cells assigned to a halftone dot.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loce et al. in view of Radochonski (U.S. 5,016,191).

Loce et al. discloses all the basic limitations of the claimed invention except for explicitly teach the plurality of pels being arranged along at least one boundary of a corresponding one of said halftone cells, wherein said plurality of halftone cells include a first halftone cell and a second halftone cell, said at least one boundary of said first halftone cell proximally aligning with said at least one boundary of said second halftone cell, thereby forming an adjacent boundary, said offsetting step not being executed relative to any pels arranged along said adjacent boundary.

Radochonski discloses a halftoning pixel processor for correcting the distortion of the halftone pixels, which are formed by sets of 3x3 matrix of halftone cells (Fig. 4A), the sets being disposed next to each other, wherein when the cells within the halftone pixel is not shifted, no correction would be needed, and wherein the shift of

the cells is need when distortion occurs as shown in Figs. 4B-4C (col. 5, lines 7-31) (col. 13, line 36 to col. 14, line 40).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Loce et al. with the aforementioned teaching of Radochonski. The motivation for doing so would have been to obtain halftone pixels without offset relative to each other so as to improve the quality of the image.

***Allowable Subject Matter***

6. Claims 9-11, 14-17, 22-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: the primary reason for the indication of the allowability of claims 9, 14, 22 is the inclusion therein, in combination as currently claimed, of the limitation "accelerating a pel shift to a prior halftone cell in a scan direction of said laser beam", which is not found taught by the prior art of record considered alone or in combination.

The primary reason for the indication of the allowability of claims 11, 15, 23 is the inclusion therein, in combination as currently claimed, of the limitation "shift an other pel subsequent to said location in said scan direction", which is not found taught by the prior art of record considered alone or in combination.

The primary reason for the indication of the allowability of claims 16, 24 is the inclusion therein, in combination as currently claimed, of the limitation "said controller changes said location if said at least one pel is on a border of said halftone cell", which is not found taught by the prior art of record considered alone or in combination.

The primary reason for the indication of the allowability of claims 10, 17, 25 is the inclusion therein, in combination as currently claimed, of the limitation "said controller changes said location to a pel that is one of at a center of said halftone cell in said scan direction and proximate to said center of said halftone cell in said scan direction", which is not found taught by the prior art of record considered alone or in combination.

#### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai C. Pham whose telephone number is (571) 272-2260. The examiner can normally be reached on M-F 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2861

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HAI PHAM  
PRIMARY EXAMINER  
March 18, 2006